UNITED STATES PATENT AND TRADEMARK OFFICE

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ART UNIT	PAPER NUMBER
2178	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/682,441	JONSSON, GUNNLAUGUR
	Examiner	Art Unit	
	Adam L. Basehoar	2178	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>25 June 2007</u>.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle,* 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23,55-72 and 88-100* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23, 55-72, and 88-100* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   This action is responsive to the Amendment filed 06/25/07.

2.   Claims 24-54 and 73-87 have been cancelled as necessitated by Amendment.

3.   Claims 98-100 have been added as necessitated by Amendment.

4.   The rejection of claim 66 under 35 U.S.C. 112 has been withdrawn as necessitated by Amendment.

5.   All previous prior art rejection to the claims have been withdrawn as necessitated by Amendment.

6.   Claims 1-23, 55-72, and 88-100 are remain pending in the case. Claims 1, 9, 16, 23, 55, 61, 67, 72, 88, 91, 94, and 97 are independent claims.

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8.   Claims 1-4, 7, 9-11, 14, 16-18, 21, 23, and 98-100 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alden et al (US-2002/0078086 06/20/02) in view of Cahill et al (US-7,099,890 08/29/06).

-In regard to substantially similar independent claims 1, 9, 16, and 23, Alden teaches A method of developing computer software from an electronic spreadsheet, the method

comprising the computer implemented steps of: coupling content/instructions in at least one cell of an electronic spreadsheet having an input cell to a window, where the content in the cell includes instruction for the object (Paragraph 47: "the data entity....calculation entity"; Paragraphs 49 and 50)(Fig. 10: 122 and 124); processing the content associated with the cell in the electronic spreadsheet; and determining properties of the window based on the content in the cell of the spreadsheet (Paragraphs 9-10: "identifying one or more cells in the spreadsheet....each entity corresponds to one or more cells")(Figs. 8 & 9).

Alden does not specifically teach creating an object-oriented programming environment via said spreadsheet and representing an object in an object-oriented programming language using said spreadsheet. Cahill et al teach creating an object-oriented programming environment via said spreadsheet and representing an object in an object-oriented programming language using said spreadsheet (column 1, lines 57-67; column 2, lines 10-22, column 5, lines 36-61: "object can be embedded in a cell of a spreadsheet"). It would have been obvious to one of ordinary skill in the art at the time of the invention for Alden to have incorporated the object-oriented functionality as shown in Cahill, because Cahill taught that spreadsheets were ultimately a programming tool and that object oriented programming had ever-expanding popularity (column 1, lines 25-35) and that by providing said functionality a user could gain the advantage of being able to access the functionality of external objects (column 2, lines 6-10 & 17-22).

-In regard to dependent claims 2, 10, and 17, Alden teaches wherein the step of coupling content in at least one cell of an electronic spreadsheet to a window further includes determining any graphical or functional attributes associated with the content in the cell to

construct the window (Paragraphs 9-10: "automatically updating" and "predetermined

attributes....to determine configuration of the entities").

-In regard to dependent claims 3, Alden teaches wherein the content in the cell of the

spreadsheet corresponds to the properties of the window in that any changes to the properties of

the window are reflected in the content in the cell (Paragraphs 9-10: "detects any change in the

cells of the spreadsheet or any change in the entities of the influence diagram....influence

diagram.")(Fig. 10).

-In regard to dependent claims 4, 11, and 18, Alden teaches wherein the step of

coupling the content is in response to determining that an event has occurred (Paragraphs 9-10 &

53-54: "a response to already existing spreadsheet" and "detecting any changes in

cells....influence diagram").

-In regard to dependent claims 7, 14, and 21, Alden teaches wherein the content in

one of the cell includes any attributes associated with the cell (Paragraph 10: "identifying one or

more cells....data or calculation cells....predetermined attributes")(Note: While not relied upon,

Cahill et al also teach said feature wherein the content of the cell includes any attributes

associated with the cell as shown in Figures 3 and 4).

-In regard to dependent claims 98, 99, and 100, Alden teaches enabling an event to

process changes and maintain equivalence events for the cells of spreadsheet (Fig. 10: 132 and

134). Alden does not specifically teach where the event includes an event type, an event handler,

and event target. Cahill et al teach enabling an event to be defined in one of the cells of one of

the spreadsheets (column 1, lines 57-67; column 5, lines 55-61), where the event includes an

event type (column 1, lines 57-67; column 5, lines 55-61: i.e. object data type), an event handler

(column 6, lines 25-61: i.e. recalculation component in view of other external objects through the

component management system; column 7, lines 34-60)(Fig. 3: 304), and event target (column 7,

lines 11-17: i.e. external object). It would have been obvious to one of ordinary skill in the art at

the time of the invention for Alden to have incorporated the event, event handler, and event

target of Cahill, because Cahill taught that object oriented programming had ever-expanding

popularity (column 1, lines 25-35) and that by providing said functionality a user could gain the

advantage of being able to access the functionality of external objects (column 2, lines 6-10 &

17-22) via event objects stored embedded in the cells of a spreadsheet (column 5, lines 55-61).

9.   Claim 55-59, 61-65, 67-70, 72, and 88-97 rejected under 35 U.S.C. 103(a) as being

unpatentable over Microsoft, Excel 2000 Screenshots, 12/31/99, pp. 1-15 (Hereafter Excel 2000)

in view of Cahill et al (US-7,099,890 08/29/06).

-In regard to substantially similar independent claims 55, 61, 67, and 72, Excel 2000

teaches a method of providing text editor functionality in an electronic spreadsheet, comprising:

defining a code column to program the computer software in the electronic spreadsheet (Page 7:

i.e. user defines column "A"); and responding to a request for a new line by inserting a new cell

in the code column (Pages 8 & 9: i.e. user requests a new line by inserting a new cell into the

column "A").

Excel 2000 does not specifically teach wherein the created spreadsheet provided a

software programming environment using the electronic spreadsheet in which software code was

programmed. Cahill et al teach creating an object-oriented programming environment via an

electronic spreadsheet in which software code was programmed in the spreadsheet (column 1,

lines 25-39 & 57-67: "spreadsheet is ultimately a programming tool"; column 2, lines 10-34:

"spreadsheet components make available a new class of object functions"; column 5, lines 36-61:

"object can be embedded in a cell of a spreadsheet")(Fig. 4). It would have been obvious to one

of ordinary skill in the art at the time of the invention for Excel 2000 to have incorporated the

object-oriented functionality as shown in Cahill, because Cahill taught that spreadsheets were

ultimately a programming tool and that object oriented programming had ever-expanding

popularity (column 1, lines 25-35) and that by providing said object function functionality a user

could gain the advantage of being able to access the functionality of external objects (column 2,

lines 6-10 & 17-22).

-**In regard to dependent claims 56, 62, and 68**, Excel 2000 teaches wherein the code

column further includes text editor functionality in that the code column behaves as a text editor

(Page 10: i.e. sample text in code column "A" is provided a plurality of text editing functions

such as spell check, font selection, justification, etc).

-**In regard to dependent claims 57, 63, and 69**, Excel 2000 teaches wherein the request

for a new line occurs when a keystroke input is received while a cell in the code column is

selected (Pages 8 & 9: i.e. A4 was selected in code column "A" for inserting a new row or shifting the cells down to insert a new cell via a keystroke).

-In regard to dependent claims 58, 64, and 70, Excel 2000 further includes: inserting the new cell at the selected cell (Pages 12 & 13: i.e. shows inserting a new cell at line A6 of the column "A"); moving cells positioned below the selected cell to create space for the new cell (Pages 12 & 13: i.e. the code in cell "A7" was moved down to "A8"); and correcting any references to the cells which are moved (Pages 11 & 13: i.e. before the added cell "A7" referenced "A5" and "A6", but after the added cell, the references were corrected to "A5" and "A7"). Excel 2000 does not specifically teach wherein the new cell was added below the selected cell. It would have been obvious to one of ordinary skill in the art at the time of the invention for Excel 2000 to have allowed the insertion of cells below the selected cell, because it was notoriously well known in the art at the time of the invention that providing the new cell below the selected cell, instead of at the selected cell, would provide the similar benefit of allowing the user to input additional data into a new cell of the selected column.

-In regard to dependent claims 59 and 65, Excel 2000 teaches wherein the code column further includes scroll bars (Pages 14 & 15: i.e. inserting a scroll bar into the code column "A").

  -In regard to substantially similar independent claims 88, 91, 94, and 97, Excel 2000

teaches a method, apparatus, and system of programming with an electronic spreadsheet, the

method comprising:

defining cells in a spreadsheet that are associated with an iterative process (Page 6: i.e.

cells A1→A3) repeating for one or more cycles (Page 3: i.e. for four cycles), where the iterative

process repeats the same action until a condition no longer applies (Pages 2→6: i.e. when the

maximum iterations equals four times the iterative processing of the calculation no longer .

applies and the iterative processing ceases); and at each cycle, determining whether to modify

content in the cells associated with the iterative process (Pages 4→5: i.e. A1 initially set to 5

+A3, A2 initially set to 10, A3 initially set to A1+A2+A3 with the final result being the values

110, 10, and 225 on Page 6).

Excel 2000 does not specifically teach wherein the created spreadsheet provided a

software programming environment using the electronic spreadsheet in which a software

program was programmed and where resulting modified content causes changes to the software

program being created using the spreadsheet. Cahill et al teach creating an object-oriented

programming environment via an electronic spreadsheet in which a software program was

programmed in the spreadsheet (column 1, lines 25-39 & 57-67: "spreadsheet is ultimately a

programming tool"; column 2, lines 10-34: "spreadsheet components make available a new class

of object functions"; column 5, lines 36-61: "object can be embedded in a cell of a

spreadsheet")(Fig. 4) and where resulting modified content causes changes to the software

program being created using the spreadsheet (column 6, lines 25-67; column 7, lines 1-67: i.e.

recalculation component is responsible for causing the spreadsheet object to recalculate the value

of the cells...whenever the spreadsheet object has changed)(Figs. 3 and 4). It would have been

obvious to one of ordinary skill in the art at the time of the invention for Excel 2000 to have

incorporated the object-oriented functionality as shown in Cahill to generate modified program

code, because Cahill taught that spreadsheets were ultimately a programming tool and that object

oriented programming had ever-expanding popularity (column 1, lines 25-35) and that by

providing said object function functionality a user could gain the advantage of being able to

access the functionality of external objects (column 2, lines 6-10 & 17-22) by utilizing object

function in spreadsheet cells to create modifiable software programs (Figs. 3 and 4).

-In regard to dependent claims 89, 92, and 95, Excel 2000 teaches wherein at least one

of the cells associated with the iterative process includes a final value cell (Page 6: A3 =

A1+A2+A3), and at least one of the cells includes an initial value cell (Page 4: A1 = 5 +A3),

where a value in the final value cell is used to modify a value in the initial value cell (Page 4: i.e.

the result determined in A3 was utilized to calculate the value of A1).

-In regard to dependent claim 90, 93, and 96, Excel 2000 teaches wherein the iterative

process is repeated for either a fixed number of times or until a condition defined in a condition

cell no longer applies, or begins to apply (Pages 2→3: i.e. Maximum Iterations equals four

times).

10.   Claims 5-6, 8, 12-13, 15, 19-20, and 22 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Alden et al (US-2002/0078086 06/20/02) in view of Cahill et al (US-

7,099,890 08/29/06) in view of Duane et al (US-6,243,721 06/05/01).

-In regard to dependent claims 5, 12, and 19, Alden teaches wherein the step of

determining that an event has occurred includes determining (Paragraph 53: "changes in the

spreadsheet or in the equivalent visual representation."). Alden does not specifically teach

wherein the event included a drag and drop event dragging the content cell from the spreadsheet

and dropping it onto the window. Duane et al teach detecting a drag and drop event wherein the

content item was dragged and dropped onto a window (column 3, lines 9-23; column 7, lines 19-

27)(Fig. 5: "Step 1"). It would have been obvious to one of ordinary skill in the art at the time of

the invention for the determining of changes of Alden to have included determining a drag and

drop as taught in Duane et al, because Duane et al teaches that dragging and dropping a content

item onto a window provides the benefit of increased efficiency and reduced complexity by

automatically positioning, aligning, and binding content objects in a window which would have

increased efficiency of creating the influence diagram of Alden (column 3, lines 9-23; column 7,

lines 19-27).

-In regard to dependent claims 6, 13, and 20, Alden further includes the step of

responding to the dropping of the content from the cell onto the window by: (a) processing the

content in the cell (Fig. 10: 122, 124); and (b) determining the properties of the window based on

the content in the cell including determining any desired behavior of the object including any

desired appearance of the window to depict the object based on the content in the cell

(Paragraphs 9-10 & 51-52)(Fig. 10: 126, 128, 130).

-In regard to dependent claims 8, 15, and 22, Alden teaches wherein the predetermined

attributes include shape, color, border, style, image, etc (Paragraph 53). Alden does not

specifically teach wherein the predetermined attributes included any one of a plurality of input

controls. Duane et al teach wherein the attributes could include the input controls of labels, text

boxes, combo boxes, list boxes, etc (column 11, lines 40-46). It would have been obvious to one

or ordinary skill in the art at the time of the invention for the attributes to have included any

input control as shown in Duane et al, because Duane et al teach that the automatic placement of

control items provides the benefit of increased efficiency and reduced complexity by

automatically positioning, aligning, and binding content objects in a window which would have

increased efficiency of creating the influence diagram of Alden (column 3, lines 9-23; column 7,

lines 19-27). In addition, the Examiner notes that it was notoriously well known in the art at the

time of the invention for the cells of spreadsheets to have included user defined input controls to

provide the benefit of additional data manipulation functionality to spreadsheets.

11.   Claims 60, 66, and 71, are rejected under 35 U.S.C. 103(a) as being unpatentable over

Microsoft, Excel 2000 Screenshots, 12/31/99, pp. 15 (Hereafter Excel 2000) in view of Cahill et

al (US-7,099,890 08/29/06) in further view of Stead (US-6,690,401 02/10/04).

-In regard to dependent claims 60, 66, and 71, Excel 2000 does not specifically teach

wherein the scroll bars enable scrolling through the code column independent of any scrolling of

the spreadsheet. Stead teaches vertical cell scrolling for scrolling individual columns of a

spreadsheet in addition to the conventional spreadsheet scrolling (column 5, lines 46-63)(Figs. 1

& 9). It would have been obvious to one of ordinary skill in the art at the time of the invention

for the scroll bars associated with the code column in Excel 2000 to have allowed independent

column scrolling, because Stead teaches that vertical cell scrolling provides the benefit of

allowing a greater number of columns of data to be displayed within a window/display area such

as those of data columns in a spreadsheet (column 4, lines 14-28).

Response to Arguments

12.   Applicant's arguments with respect to amended independent claims 1, 9, 16, 23, 55, 61,

67, 72, 88, 91, 94, and 97 have been considered but are moot in view of the new ground(s) of

rejection.

Conclusion

13.   Applicant's amendment necessitated the new ground(s) of rejection presented in this

Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this

final action.

14.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

Please note the additional cited referenced on the PTO-892 form.

15.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Adam L. Basehoar whose telephone number is (571)-272-4121.

The examiner can normally be reached on M-F: 7:00am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Hong can be reached on (571) 272-4124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ALB

STEPHEN HONG
SUPERVISORY PATENT EXAMINER